(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



T HARD BUILDING HERD DOM COM COM COM HIN HE WELL AND A SHE WAS A S

(43) International Publication Date 20 November 2003 (20.11.2003)

PCT

(10) International Publication Number WO 2003/096128 A3

(51) International Patent Classification⁷: 1/123, G08B 26/00

G08G 1/00,

(21) International Application Number:

PCT/US2003/007770

(22) International Filing Date: 13 March 2003 (13.03.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/364,303

14 March 2002 (14.03.2002) U

(71) Applicant (for all designated States except US): EICES RESEARCH, INC. [US/US]; 101 Chalon Drive, Cary, NC 27511 (US).

- (72) Inventor; and
- (75) Inventor/Applicant (for US only): KARABINIS, Peter, D. [US/US]; 101 Chalon Drive, Cary, NC 27511 (US).
- (74) Agent: BIGEL, Mitchell, S.; Myers, Bigel, Sibley & Sajovec, P.A., P.O. Box 37428, Raleigh, NC 27627 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

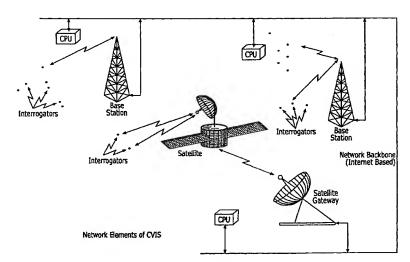
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 19 August 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A COOPERATIVE VEHICULAR IDENTIFICATION SYSTEM



(57) Abstract: Cooperative Vehicular Identification Systems and Methods (figure 10), capable of monitoring and recording vehicular law violations, with the assistance and cooperation of the vehicles in violation, are disclosed. Real-time information from vehicular sensors is communicated to a Central Processing Unit (CPU). Strategically located Interrogator devices (Interrogators), on roads/highways, at intersections, in and around school zones, integrated with traffic lights, etc., issue inquiries/interrogations to passing-by vehicles. Vehicles proximate to such Interrogators respond with unique identifying information and with parameter lists provided by their vehicular sensors. Each Interrogator inquiry can provide data, including the lawful parameter limits associated with its location. In response to having successfully decoded an inquiry, and in response to the state of its vehicular sensors, a vehicular Transponder may transmit information to the specific Interrogator that has issued an inquiry. The Interrogator then relays relevant identifying information to the CPU for further processing.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/07770

A. CLASSIFICATION OF SUBJECT MATTER						
IPC(7) : G08G 1/00, 1/123; G08B 26/00						
US CL: 340/10.1, 10.6; 701/33,35, 301; According to International Patent Classification (IPC) or to both national classification and IPC						
	International Patent Classification (IPC) or to both na DS SEARCHED	HOHAI Class	III CALION AND LPC			
Minimum documentation searched (classification system followed by classification symbols)						
U.S. : 3	40/10.1, 10.6; 701/33,35, 301;					
Documentation	on searched other than minimum documentation to the	extent that	such documents are included in) the fields combod		
_ Journoman	come aminimize documentation to the	uial	accuments are included it	ricius scarcilicu		
Electronic da	ta base consulted during the international search (name	e of data ba	ise and, where practicable, sear	ch terms used)		
Please See Continuation Sheet						
C. DOCUMENTS CONSIDERED TO BE RELEVANT						
Category *						
Category *	Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.					
^	US 6,223,125 (HALL) 24 April 2001, figures 1-12			1		
х	US 6.124.810 (SEGAT, et al) 26 September 2000 pe	argoranh br	ridging cols 3 and 4	1		
41	US 6,124,810 (SEGAL et al) 26 September 2000, paragraph bridging cols. 3 and 4			4		
Х	US 6,107,917 (CARRENDER et al) 22 August 2000), figures 1	and 4	1		
-	1			•		
				1		
j						
				1		
				1		
			į			
'						
	doguments and their division of	$\overline{\Box}$	Con metalita iii			
	documents are listed in the continuation of Box C.	<u> </u>	See patent family annex.			
• S	pecial categories of cited documents:	"T"	later document published after the inte			
	t defining the general state of the art which is not considered to be		date and not in conflict with the applic principle or theory underlying the inve			
	lar relevance	437				
"E" carlier ap	plication or patent published on or after the international filing date	"X"	document of particular relevance; the considered novel or cannot be considered.			
-			when the document is taken alone			
	t which may throw doubts on priority claim(s) or which is cited to the publication date of another citation or other special reason (as	"Y"	document of particular relevance; the	claimed invention cannot be		
specified)		•	considered to involve an inventive step	p when the document is		
"O" document	referring to an oral disclosure, use, exhibition or other means		combined with one or more other such being obvious to a person skilled in the	documents, such combination		
"P" document published prior to the international filing date but later than the priority date claimed		"&"	document member of the same patent	family		
				sh =0=0=4		
Date of the actual completion of the international search			Date of mailing of the international search report			
08 June 2004 (08.06.2004)			Authorized officer Michael Horabik Michael Horabik			
Name and mailing address of the ISA/US			ed officer	1/		
	il Stop PCT, Attn: ISA/US	Michael	Michael Horobik			
Commissioner for Patents P.O. Box 1450						
Alexandria, Virginia 22313-1450			ne No. 703-308-6071			
	Facsimile No. (703)305-3230					

Form PCT/ISA/210 (second sheet) (July 1998)

·	PCT/US03/070
INTERNATIONAL SEARCH REPORT	
·	
'	
•	
Continuation of B. FIELDS SEARCHED Item 3:	
Search tool: EAST	
Search terms: vehicle bidirectional wireless communication, collision avoidance	
• •	
'	
•	
Form PCT/ISA/210 (second sheet) (July 1998)	